

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 509549 DJS	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/NZ2004/000224	International filing date (<i>day/month/year</i>) 17 September 2004	Priority date (<i>day/month/year</i>) 19 September 2003
International Patent Classification (IPC) or national classification and IPC Int. Cl. E04D 1/36 (2006.01)		
Applicant HAYNES, Andrew, Leo et al		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4. sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of 7 sheets, as follows:</p> <div style="margin-left: 40px;"> <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. </div> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>																									
<p>4. This report contains indications relating to the following items:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%;"><input checked="" type="checkbox"/></td> <td style="width: 20%;">Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>		<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input checked="" type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand 18 April 2005	Date of completion of this report 6 December 2005
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer VINCE BAGUSAUSKAS Telephone No. (02) 6283 2110

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NZ2004/000224

Box No. I Basis of the report

1. With regard to the language, this report is based on:

- ☒ The international application in the language in which it was filed
- ☐ A translation of the international application into _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3(a) and 23.1 (b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:☐ the international application as originally filed/furnished☒ the description:

pages 1-13 as originally filed/furnished

pages* received by this Authority on _____ with the letter of

pages* received by this Authority on _____ with the letter of

☒ the claims:

pages as originally filed/furnished

pages* as amended (together with any statement) under Article 19

pages* 14-20 received by this Authority on 31 October 2005 with the letter of 26 October 2005

pages* received by this Authority on _____ with the letter of

☒ the drawings:

pages 1-17 as originally filed/furnished

pages* received by this Authority on _____ with the letter of

pages* received by this Authority on _____ with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NZ2004/000224

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 3, 11-14, 16-28, 30, 32-35, 44, 46	YES
	Claims 1, 2, 4, 6-10, 15, 29, 31, 36-41, 43, 45, 47-53	NO
Inventive step (IS)	Claims 3, 11-14, 16-28, 30, 32-35, 44, 46	YES
	Claims 1, 2, 4, 6-10, 15, 29, 31, 36-41, 43, 45, 47-53	NO
Industrial applicability (IA)	Claims 1-4, 6-41, 43-53	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

The relevant citation from the ISR is

D1) Derwent Abstract 2003-395053/38.

NOVELTY (N) 1, 2, 4, 6-10, 15, 29, 31, 36-41, 43, 45, 47-53

D1) discloses the use of a ridge cap flashing member that is adaptable to be conformed to the roofing material. In particular the surface of the flashing is aid to be "treated to give it a hydrophobic character". To the person skilled in the art this would be understood to include the use of paints. Furthermore the flashing is adhered to the roof material with the use of adhesive bands (15). There is no restriction in the present claim that the ridge overlying region does not have corrugations. Therefore the invention as defined in claims 1 and 39 is considered not to be novel over the prior art.

The features added by the appended claims 2, 4, 6-10, 15, 29, 31, 36-41, 43, 45, 47-53 are also identifiable in the citation.

INVENTIVE STEP (IS) 1, 2, 4, 6-10, 15, 29, 31, 36-41, 43, 45, 47-53

As for Novelty above

CLAIMS:

1. A roof flashing for or suitable for flashing a "ridgeline" as herein defined, said flashing being of multiple materials and being at least in part laminated and comprising or including:
 - 5 a) a "ridge" overlying region to overlie the actual or phantom "ridge" to be flashed, the ridge being as herein defined,
 - b) a first flanking region extending from the ridge overlying region, and
 - c) a second flanking region extending from the ridge overlying region,wherein the ridge overlying region is conformed to a retainable three
10 dimensional form and/or is conformable and can retain to a three dimensional form,
and wherein the first and second flanking regions extend from the ridge overlying region so as to flank the actual or phantom "ridge" to be flashed by the flashing,
15 and wherein there is a weathering surface of one or more weathering material(s) and at least one of the flanking regions has at least a partial underlying support of the weathering material(s), and at least one of said flanking regions is at least conformed to a three dimensional form, and is conformable to a retained or retainable three dimensional form or has a distal
20 extremity greater in extent than the proximal extent of that flanking region to said ridge overlying region.
2. A roof flashing as claimed in claim 1 wherein each of the flanking regions has at least a partial underlying support of the weathering material(s).
3. A roof flashing as claimed in claims 1 or 2 wherein said first and second
25 flanking regions depend from a first zone of articulation immediately adjacent said ridge overlying region.
4. A roof flashing as claimed in any one of claims 1 to 3 wherein the roof flashing includes preferably by removal of a release sheet or release sheets to reveal an adhesive or other tack providing surface to allow at least part of at least

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one of the flanking regions to be adhesively attached to a support surface e.g. of a roofing material to be flashed.

5. A roof flashing as claimed in any one of claims 1 to 4 wherein in some options one or more materials e.g. as a laminate, provide the ridge overlying
5 region whilst in other forms the ridge overlying region can be at least in part, primarily or wholly of the one or more material(s) providing a weathering surface notwithstanding the fact that the flashing is at least in part laminated (e.g. whether solely in one or both of the flanking regions or otherwise).
6. A roof flashing as claimed in any one of claims 1 to 5 wherein the distal
10 ends of one or each of said first and second flanking regions distal from said "ridge" overlying region is conformed into a three dimensional region to allow (by conformity or material thus made available) association with undulating or otherwise three dimensional roofing materials, to be flashed, flanking said "ridge" or "ridgeline".
7. A roof flashing as claimed in any one of claims 2 to 6 wherein said three
15 dimensional region is at least in part held in its three dimensional form by said partial underlying support.
8. A roof flashing as claimed in any one of claims 2 to 7 wherein said partial
underlying support is a conformable yet shape retaining three dimensionally
20 conformed material.
9. A roof flashing as claimed in any one of claims 1 to 8 wherein said three dimensionally conformed material underlies said weathering layer.
10. A roof flashing as claimed in any one of claims 1 to 9 wherein there is
sufficient tack retaining adhesive on the non-weathering side of at least part of
25 one or both said first and second flanking regions and/or said three dimensionally to associate said flanking regions to said roofing materials.
11. A roof flashing as claimed in any one of claims 1 to 10 wherein said tack retaining adhesive lies between said weathering layer and said dimensionally conformed material.

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12. A roof flashing as claimed in any one of claims 1 to 10 wherein said dimensionally conformed material lies between said weathering layer and said tack retaining adhesive.
13. A roof flashing as claimed in any one of claims 1 to 12 wherein said three
5 dimensionally conformed material is a metal.
14. A roof flashing as claimed in any one of claims 1 to 13 wherein said metal can be sheet aluminium (and optionally may be wholly or in part be able to be expanded).
15. A roof flashing as claimed in any one of claims 1 to 14 wherein said three
10 dimensional region is configured so as to exhibit a substantially sinusoidal section when being viewed in section towards said distal ends.
16. A roof flashing as claimed in any one of claims 1 to 15 wherein said three dimensionally conformed material is a perforate or expanded sheet of a suitable metal.
- 15 17. A roof flashing as claimed in any one of claims 1 to 16 wherein said three dimensionally conformed material is only partially expanded prior to application of said flashing.
18. A roof flashing as claimed in any one of claims 1 to 17 wherein said three dimensional region can expand and contract in directions parallel and transverse
20 to said "ridgeline" which said flashing is to flash to further engage and conform to said roofing materials.
19. A roof flashing as claimed in any one of claims 1 to 18 wherein a suitable natural or synthetic rubber material or plastics material provides said exterior flexible weathering surface.
- 25 20. A roof flashing as claimed in claim 19 wherein said suitable natural or synthetic rubber material or plastics material is selected from the Desmopan® range of thermoplastic polyurethane materials.
21. A roof flashing as claimed in any one of claims 1 to 20 wherein said "ridge" overlying region is conformed, as part of said lamination to a substantially rigid
30 section underlying said weathering layer.

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22. A roof flashing as claimed in claim 21 wherein said substantially rigid section is of substantially complimentary configuration conforming to said "ridge" beam or beams, or structure defining said "ridgeline".
23. A roof flashing as claimed in any one of claims 1 to 22 wherein said
5 flashing has differing degrees of flexibility of the lamination over its cross section.
24. A roof flashing as claimed claim 23 wherein said differing degree of flexibility is at least in part due to differing flexibility of said weathering later.
25. A roof flashing as claimed in either of claims 23 or 24 wherein said
10 differing degree of flexibility of said weathering layer is due to differing thickness and/or differing material properties (such as density, flexural strength, Shore hardness etc) of said weathering layer.
26. A roof flashing as claimed in any one of claims 21 to 25 wherein said weathering layer over said rigid section is between 100 and 600 microns thick.
- 15 27. A roof flashing as claimed in any one of claims 21 to 26 wherein said weathering layer over said rigid section is 200 microns thick.
28. A roof flashing as claimed in any one of claims 1 to 27 wherein said three dimensionally conformed material is mould embedded at least in part in another material, said another material being flexible but not necessarily being said
20 flexible material(s) providing the exterior weathering surface.
29. A roof flashing as claimed in any one of claims 4 to 28 wherein a release sheet is associated with said tack retaining adhesive.
30. A roof flashing as claimed in any one of claims 1 to 29 wherein said "ridge" overlying region includes a number of openings therethrough to allow
25 penetrative fixers to affix the same to a "ridge" beam or beams.
31. A roof flashing as claimed in any one of claims 1 to 30 wherein said flashing is to underlie a ridge cap or ridge tile.
32. A roof flashing as claimed in any one of claims 1 to 31 wherein said flashing has, at said distal ends further extensions ("flank returns") which have a
30 third zone of articulation from said distal end to be articulated to engage with the

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under side of said ridge capping(s) or tile(s) to form a further water and weather proofing of said ridge.

33. A roof flashing as claimed in claim 32 wherein said zone of articulation runs parallel to said ridge overlying region.

5. 34. A roof flashing as claimed in either claim 32 or 33 wherein said flank returns are separable into portions by lines of separation running substantially perpendicular to said line of articulation.

35. A roof flashing as claimed in any one of claims 32 to 34 wherein said flank returns further have zones of adhesion to engage with the underside of said ridge capping(s) or tile(s).

36. A roof flashing as claimed in any one of claims 1 to 35 wherein said flashing may form the ridgeline without reliance upon a ridge cap or ridge tile.

37. A roof flashing as claimed in any one of claims 1 to 36 wherein said flashing is coloured to match the roofing material or tiles to which it is applied.

15 38. A roof flashing as claimed in any one of claims 1 to 37 wherein said flashing may be coloured in a form as desired by the end user.

39. A method of flashing a roof with a flashing as herein before described, wherein the ridge overlying region is applied to an actual or phantom "ridge" to be flashed,

20 first and second flanking regions extending from said ridge overlying region are located to lie upon and conform to roofing material(s) either side of said ridge with at least one of the flanking regions is at least conformed to a three dimensional form, and is conformable to a retained or retainable three dimensional form or has a distal extremity greater in extent than the proximal
25 extent of that flanking region to said ridge overlying region to conform with said roofing material(s) and thus to form with said roofing material(s) a continuous weathering surface.

40. A method as claimed in claim 39 wherein each of the flanking regions has at least a partial underlying support of the weathering material(s).

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51. A flashing as herein described when of a form and/or structure substantially as hereinbefore described with reference to any one or more of the accompanying drawings.
52. The use or methods of use of a flashing or flashing structure of any of the
5 kinds as herein described.
53. A structure flashed by a flashing or flashing structure of any one of claims as herein described.